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ABSTRACT

The Montana Council on Vocational Education conducted a business and industry survey in February 1993 to recommend initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs. A representative sample of the various types and sizes of Montana businesses were selected. Surveys were mailed to the following: chambers of commerce and Job Service Offices (n=17, 41 percent return); vocational-technical administrators, students, and others involved with education in Montana (n=83, 61 percent return); and business, industry, and labor (n=300, 18 percent return). Survey respondents noted that vocational-technical education programs are stereotyped as less desirable paths to careers. In view of this respondents thought that this image should be dispelled, because vocational-technical education can actually lead to rewarding careers. Respondents agreed that those employers who use vocational-technical programs to find employees are well satisfied, but that many employers do not consider using this source for new employees. Survey respondents frequently mentioned the need for marketing vocational education programs. All of Montana's postsecondary vocational-technical programs offer job training for businesses, but only 14 percent of businesses use the system for retraining their employees. Employers liked vocational student organizations for their leadership-training roles. Employers were willing to engage in education/business partnerships and to donate equipment. The tech prep initiative recently implemented in the state is valued by business respondents. Recommendations included the following: increasing communication about the vocational education program, providing real-world work experience for vocational students, changing the curriculum to meet current needs, and marketing vocational-technical education. (KC)

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EDUCATION AND THE PRIVATE SECTOR

MONTANA COUNCIL
ON
VOCATIONAL EDUCATION

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STRENGTHENING THE LINKS:

EDUCATION AND THE PRIVATE SECTOR

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WITH:

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Montana Council on Vocational Education

Strengthening the Links: Education and the Private Sector

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Preface

The past decade has been a period of extensive educational reform at both the state and local levels in Montana schools. This is also true at the national level as evidenced by the fact that approximately 15,000 school districts at 80,000 schools are in the process of implementing various educational reform (U.S. General Accounting Office Report to Congress, April 30, 1993). In addition to the public sector, the private sector has proposed numerous reforms for our education systems.

Regardless of the source of the recommendations, there seems to be little argument that the current public education system needs to make some changes in order to supply a quality workforce for the future.

Recommendations have been made by a variety of concerned individuals and groups. A common theme among these is the importance of developing leadership, interpersonal, academic and technical skills in preparing students for our future workforce.

Introduction

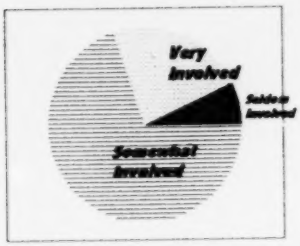
Vocational education and the private sector share a concern for the quality of today's workforce. Vocational-technical education programs are charged with the task of providing quality instruction in skill areas as well as supplying leadership opportunities and hands-on experiences necessary to prepare students for our future workforce.

Historically, business, industry and labor have been involved in vocational-technical education in Montana. To ensure a continual supply of high quality employees, the private sector and education must continue to interact.

Maintaining strong vocational programs in high schools, vocational-technical centers and community colleges will require active working relationships between education and the private sector. These public-private partnerships must be built on mutual trust, common goals and strategies. Neither education nor the public sector can do it alone.(1)

The Montana Council on Vocational Education (MCVE) conducted surveys in 1990 and 1993 to assess interaction between business/industry/labor and education in Montana and to make recommendations for strengthening existing links.

How Involved in Education is Montana's Private Sector?



Responses from Educators-1993 MCVE Survey

There are numerous partnerships and linkages that exist between vocational education and the private sector in Montana. The graph on the left indicates that over 90% of Montana's vocational-technical educators feel that education in Montana is either 'somewhat' or 'very' involved with the private sector. Involvement in the activities of local advisory councils and participation in on-the-job training programs are currently the major contributions by the business community according to the 1993 MCVE survey.

The results of the MCVE studies show that Montana's private sector is willing to assist vocational-technical educators in modernizing their programs. Likewise, the education community in Montana recognizes the importance of input from business/industry and labor in ensuring that vocational programs are serving the needs of today's workforce.

The studies also show that education is expected to accept a leadership role in promoting private sector involvement. Potential employers are, for the most part, reluctant to take the initiative and approach education with strategies for improvement and change. However, they are often willing to share their expertise, their facilities and personnel if they are invited. Also, the private sector can encourage interaction by inviting educators to participate in professional gatherings.

Purpose

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 charges the MCVE with responsibility to "...advise the State Board and make reports to the Governor, the business community, and general public of the State, concerning ...policies the State should pursue to strengthen vocational education and initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs."

In addition, the MCVE will "submit recommendations to the state board on the conduct of vocational education programs conducted in the State which emphasize the use of business concerns and labor organizations and recommend procedures to the State board to ensure and enhance the participation of the public in the provision of vocational education at the local level within the State, particularly the participation of local employers and local labor organizations."

To fulfill these requirements, the MCVE organized and conducted the Business and Industry survey in February, 1993. *The intent of the survey was to "recommend initiatives and methods the private sector could undertake to assist in the modernization of vocational education programs."*

TABLE 1

SAMPLE SIZE	
Agriculture	2
Mining	8
Construction	6
Manufacturing	21
Transportation, Utilities Communication	17
Wholesale Trade	16
Retail Trade	58
Finance, Insurance Real Estate	13
Services	53
Health	27
Other	79
TOTAL MAILED 300	

Profile of Survey Respondents

To obtain business participants for the MCVE survey, Standard Industry Codes (SIC), Montana Census and Department of Commerce data were used to sort companies by type of business/industry and employment size. The sample reflects the proportional share of each employment group to total Montana employment numbers (see Table 1).

Survey 1: Seventeen surveys were mailed to Chambers of Commerce and Job Service Offices. Seven (41%) were returned.

"Vocational education needs to be heard and more students need to be aware that vocational education is a very viable resource to the future."
(1993 MCVE Survey Response)

"Private as well as government sectors are very degree-oriented regarding job placement - they tend to overlook skilled or trained individuals who could assume the position with the same degree of competence." (1993 MCVE Survey Response)

Survey 2: Eighty-three surveys were mailed to vocational-technical educators, administrators, students and others involved with education in Montana. Fifty-one (61%) were returned.

Survey 3: Three hundred surveys were mailed to business/industry/labor. Fifty-five (18%) were returned.

Vocational-Technical Education

"Vocational Education", as defined in the Carl D. Perkins Vocational and Applied Technology Education Act of 1990, means organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree.

Such programs shall include competency-based applied learning which contributes to an individual's academic knowledge, higher-order reasoning, and problem-solving skills, work attitudes, general employability skills, and the occupational-specific skills necessary for economic independence as a productive and contributing member of society. The term 'vocational education' includes applied technology education.

Image & Perception of Vocational Education

Stereotyping of vocational-technical programs as less desirable career paths than four-year college programs exists in Montana, according to the 1993 survey and is considered a barrier to education.

"Despite statistical projections that show most workers will not - and need not - pursue a traditional four-year college education, education leaders and foundations consistently support programs whose mission is to move the majority of people into four years of traditional higher education." states Marvin Feldman, President of the Fashion Institute of Technology, New York, "We must recognize that vocational education is not something we sentence a kid to when we've given up on him or her as a learner. Vocational education can be excellent and it can be rigorous. It can even be an integral part of a liberal arts education. And it can motivate students to stay in school."

The consensus of a 1992 study by the South Carolina Council on Vocational and Technical Education was that:

1. Vocational-technical education programs are not as highly regarded by parents and students as are the traditional academic programs of study. The public misperception is still that vocational courses are for those "less academically fit" - students who cannot succeed in more rigorous academic settings, such as college prep courses.

2. All students should be introduced to career opportunities early in their educational programs. All choices, those requiring four-year degrees and those requiring postsecondary training but not necessarily four-year programs, should be presented to the student for his/her consideration.

3. Too many students are not getting the solid foundation in the basic skills which is so necessary in order to progress to training at more advanced levels. There should be greater emphasis on basic technology skills.(2)

To quote Richard Miguel, Assistant Superintendent and State Director of Vocational Education of Illinois: "Too many schools tend to coast on the laurels of the percent of students they send to college! Worse still they seem to communicate to the rest of the student body (the majority, by the way) that they are incapable people - a deadly legacy for our workforce and our economy. No program that labels students as inferior to college-bound students should be encouraged, even if the labeling is subtle and camouflaged with euphemisms. If a school system relegates a program to second-class status, it will seriously put students at risk. Too often this has happened to vocational education programs. We need genuine standards and rigor for all students, not to sort them out but to encourage everyone to perform to his or her highest potential."

"Vo-Techs provide a very important training aspect for our business community and prospective businesses to our area...you need to 'toot your own horn' and inform the general public." (1993 MCVE Survey Response)

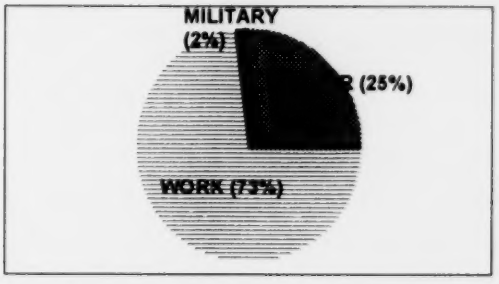
In the 1993 Montana Council on Vocational Education (MCVE) survey, 100% of the respondents employed by Chambers of Commerce, Job Service or other placement services reported that there is not enough emphasis on technical training and job skills for secondary students. To quote one respondent - "There is far too much emphasis on 'college track' programs and too little on vocational education, apprenticeship and trade programs."

Placement

The consensus of responses to the MCVE survey was that those employers who use vocational-technical programs as an employee resource are well satisfied. However, many employers don't consider using vocational programs as a source of new employees. The need for marketing vocational education programs was mentioned frequently.

"Kids don't relate what they learn to the world of work soon enough in their education." (1993 MCVE Survey Response)

PLACEMENT
POSTSECONDARY VOCATIONAL STUDENTS



The ten postsecondary institutions that offer vocational-technical education in Montana estimate that 64% of the 1,012 program completers were placed in jobs in their major field. (3)

Fifty-eight percent of the private sector respondents to the 1993 survey employ graduates of Montana's secondary or postsecondary vocational-technical education programs. Of these, 81% consider vocational education graduates as above average in job performance.

Retraining

All of Montana's postsecondary vocational technical programs offer on-the-job training, off-hour training, customized training and training for dislocated workers. These services are available locally to most Montana's employers, however, only 14% use this system for retraining their present employees. Those who do use it consider the quality of the training to be above average.

The Role of Vocational Student Organizations

In the October 1992 issue of the *Journal of Vocational Education*, Betsy Brand, former Assistant Secretary for Vocational and Adult Education, U.S. Department of Education stated: "Vocational-technical education will continue to play a pivotal role in establishing close ties with the business and labor communities. It has been a catalyst for a variety of partnerships and alliances through cooperative education, school-based enterprises and vocational academics. Vocational student organizations also have a vital and promising role in helping to prepare a competitive, world-class workforce in America. VSOs demand high standards, quality workmanship, demanding scholarship and respect for the dignity of work."

Numerous surveys have been conducted to identify the attributes of the ideal employee. The responses shown at the left are similar to those to the MCVE's 1990 survey. Montana employers ranked the following competencies as most important:

1. Positive work habits and attitudes;
2. Ability to follow directions;
3. Communications (speaking and listening)
4. Reasoning, problem solving and interpersonal skills
5. Ability to assume responsibility

"Professionals tell me they need employees who can work with others, follow instructions and make decisions - eagerly, enthusiastically and self-confidently. They want them to be honest, to listen well, communicate effectively and be willing to risk failure. In other words they are looking for people with leadership qualities." writes Reynaldo Martinez, Jr. , an assistant professor of Industrial, Technological and Occupational Education at the University of Maryland, " Unlike other teaching disciplines, vocational education emphasizes the development of these qualities. One of the best means of advancing those higher-order personal skills, in fact, is through the leadership development activities of our vocational student organizations. VSOs are the perfect channel for broadcasting the workplace skills of students and for getting the word out about their strengths and achievements."

Graduation Requirements

The accreditation standards that were implemented in Montana as a result of ***Project Excellence*** in 1988 increased graduation requirements in Montana. In a 1991 article in Helena, Montana's ***Independent Record,*** Jim Fitzpatrick (MCVE Executive Director) stated that it places " so much emphasis on academic courses that students have little time left over for vocational or elective courses. Schools are ignoring

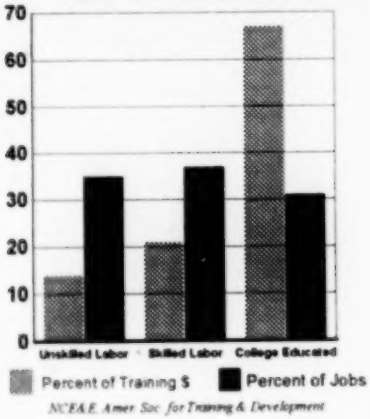
16 ATTRIBUTES LISTED BY CORPORATE RECRUITERS AS NECESSARY FOR POTENTIAL EMPLOYEES

1. Ability to communicate
2. Intelligence (ideas,originality)
3. Confidence
4. Willingness to accept responsibility
5. Initiative
6. Leadership
7. Energy Level
8. Imagination
9. Flexibility
10. Interpersonal skills

From a survey conducted by the College Placement Council and discussed in Does Your Resume Wear Blue Jeans? by G. Edward Good. Dist. by Montana State University Career Serv.

"Vocational student organizations also have a vital and promising role in helping to prepare a competitive, world-class workforce in America." (1993 MCVE Survey Response)

DISTRIBUTION OF BUSINESS TRAINING DOLLARS



"Most employers feel that they are investing in the future of their own industry by educating students in a practical job-related way. The students also benefit from this type of education because they can apply the skills that they have learned when they go into the job force." (1993 MCVE Survey Response)

the other half of education - the practical half. People with vocational training are vital to the state's workforce and a lack of adequately-trained workers could harm Montana's chances at economic development. The educational community needs to re-focus."

Nation at Risk, published by the National Commission on Excellence in Education in 1983, also contained recommendations for increased graduation requirements. This report was a reaction to declining scores on standard tests and complaints from business and military leaders that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling and computation.

The Systems Analysis Department of Sandia Laboratories of Albuquerque, New Mexico, reports in *Perspectives on Education in America* that the Commission on Skills of the American Workforce investigated the spending of training dollars by businesses and found some surprising results. Less than 10% of all business training dollars go to blue-collar, entry level workers. Additionally, very little of this small sum is spent on basic skills training but rather on orientation for new hires and motivational training for long-term employees. They also reviewed research in business education and training practices and found that very few companies point to inadequate academic preparation of new employees but rather focus on social 'skills' such as punctuality and personal appearance.

Conflicting data makes it difficult for education and business to identify and act upon the issues that are confronting schools and the workforce today. However, it is generally accepted that many Americans would be more employable if they were to receive adequate training.

Montana's Superintendent of Public Instruction, Nancy Keenan was quoted in the October, 1992 issue of the *Journal of Vocational Education*: "We can't count on industry to teach basic skills. Small firms, which supply the vast majority of jobs in states such as Montana, don't have the financial capacity to train workers. If we expect schools to take up the slack, schools need up-to-date technological equipment."

Competency Standards

From the 1983 Task Force Report from Montana's Office of Public Instruction, ***Excellence in Montana Schools***: Whether high school graduates go to college, vocational-technical school, other training or directly into the work force, all graduates need to possess a set of basic competencies in communication, computation, thinking and work related skills. Each competency must be performed in order for the graduate to participate successfully in our society.

President Bush's ***America 2000*** educational plan, business and labor were asked to establish job-related skill standards, built around core proficiencies and to develop "skill certificates" to accompany these standards.

The Secretary's Commission on Achieving Necessary Skills (SCANS) was asked to define the know-how needed in the workplace and to consider how this know-how is best assessed. The Commission consists

of representatives from banking, education, state government, corporations, labor, business and industry. They found that in a very basic sense, the American public school system was designed to serve the economic and social needs that existed around the turn of the last century. *What Work Requires of Schools* was the first SCANS contribution to the high-performance discussion. It created a common vocabulary to help the worlds of work and school to communicate. Despite the widespread agreement among employers and educators that too many young people complete school unequipped for the workplace, there has been no clear communication about what the schools should do. SCANS described educators and business leaders as "ships passing in the night" on this issue.(6)

The new high-performance workplace demands a person who can work productively, think critically and make decisions according to William Brock, Chairman of the Secretary's Commission on Achieving Necessary Skills (SCANS).

"Make contact with business and determine what specific skills and characteristics they are looking for..." (1993 MCVE Survey Response)

The U.S. Department of Labor publication *SCANS: Learning a Living* states that employer-sponsored training, both public and private, must be upgraded and integrated around the SCANS know-how. Moreover, apprenticeship training and the second chance efforts for the unemployed and marginally employed, should be reoriented to integrate the SCANS skills into their basic education and job-specific training.

Projecting Workforce Needs

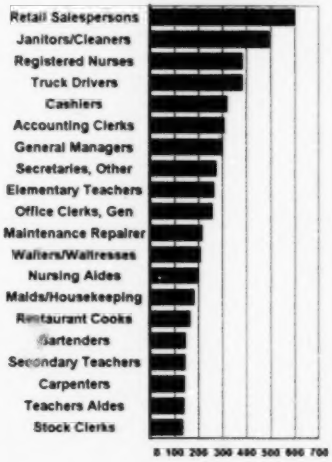
At MCVE's 1990 conference; *A Quality Workforce--The Key to Economic Development*, Randle Romney, Branch Manager for IBM, stressed the importance of vocational education in training potential employees with basic skills and competencies. He illustrated the critical shortage of trained workers and cited the need for salespeople and systems engineers. He suggested that vocational-technical and adult education work more closely with business and industry to meet their training needs.

Studies, surveys and publications responding to the need for a well-trained workforce cite the importance of business and education to interact in program development. Businesses responding to MCVE's 1993 survey suggested that vocational-technical programs should project the short and long term needs of Montana's job market to determine the need for training.

Projections indicate that the majority of new jobs by the year 2000 will be in the service area. Approximately 83 percent of all jobs by the end of this decade will not require a four year college education according to Verna Green, former Associate Vice President of D.A. Davidson & Co.

However, according to Sandia Laboratories' research, forecasting workforce skills beyond one or two years into the future is highly speculative and is uncomfortable for those interviewed in the business community. According to business leaders polled, the most important workplace skills for future employees were behavioral skills such as: being free from substance abuse; honesty; respect; and punctuality.

MONTANA HIGH GROWTH OCCUPATIONS



Estimated Annual Openings to 1995

(Montana Department of Labor & Industry)

TYPES OF SUCCESSFUL PARTNERSHIPS IN MONTANA

	#
On-the-Job Training	20
Advisory Councils	20
Donations-Equip. etc.	19
Vo-Tech Training	16
Business Training	13
Chambers & Job Service	13
Guest Speakers	11
Tech Prep/2+2 Concept	9
VSO Competitions	6
Informational Interviews	4
Curriculum Advice	2
Tours	2

The above figures represent responses from educators in the 1993 MCVE Survey.

In an effort to establish closer business / industry / labor and education partnerships, what services could you provide?...

FROM BUSINESS:

"I would share my knowledge, skill and time."

FROM EDUCATION:

"We must lead by example: risk making some major changes; .....and realize that the role of change agent and leader is sometimes painful."(4)

In addition to the vocational-technical skills learned by secondary and postsecondary students, the attributes most important to successful, life-long employment are the leadership and interpersonal skills that can be acquired through simulated or actual cooperative work experiences and membership in vocational student organizations.

Existing Linkages

There are a wide variety of partnerships existing between Montana's vocational education programs and business/labor/industry. On-the-job training programs were the most frequently mentioned type of current involvement. Advisory councils are the second most common linkage between vocational-technical education and the private sector in Montana.

Respondents to the 1993 survey listed numerous instances of partnerships thriving in Montana. The following are a sample of the responses:

-"Each vocational technical area at Dawson Community College (DCC) receives direct input from an advisory board. Advisory boards consist of leaders from the community in specific vocational fields. In addition to the advisory boards, DCC also works closely with Glendive Job Service for placement opportunities for our graduates. DCC Fact Sheets are sent out in information packets by the Glendive Chamber of Commerce."

- "At the Career Center in Billings, there has been a partnership between the Homebuilders Association and the Center since 1975 when the Center students built their first house. All Career Center programs have advisory boards comprised of local representatives of the various industries."

- "The Customer Service Institute is composed of staff and faculty of the Great Falls Vocational-Technical Center and staff of the Chamber of Commerce. This committee has provided 5 seminars and 18 teleconferences in the last two years for business people in the community on *Top Quality Management, Customer Service* and *A Company's Vision.*"

- "Flathead Valley Community College's Hospitality & Tourism Program worked with the local Visitor and Convention Association Board of Directors to develop curriculum for the new Hospitality and Tourism Program. Board members also provide internships for the College's Hospitality and Tourism students."

- "The Billings Career Center Urban Agriculture program is greatly involved with the Zoo Montana development. On Arbor Day, we will be planting 2500 seedlings at Zoo Montana. Our Urban Ag class has taken several field trips to area nurseries to get a hands-on look at how the nursery industry really works."

- Montana's Job Service offices currently report that they work with vocational-technical programs in a number of ways. They link employers with students, help with aptitude testing, serve on task

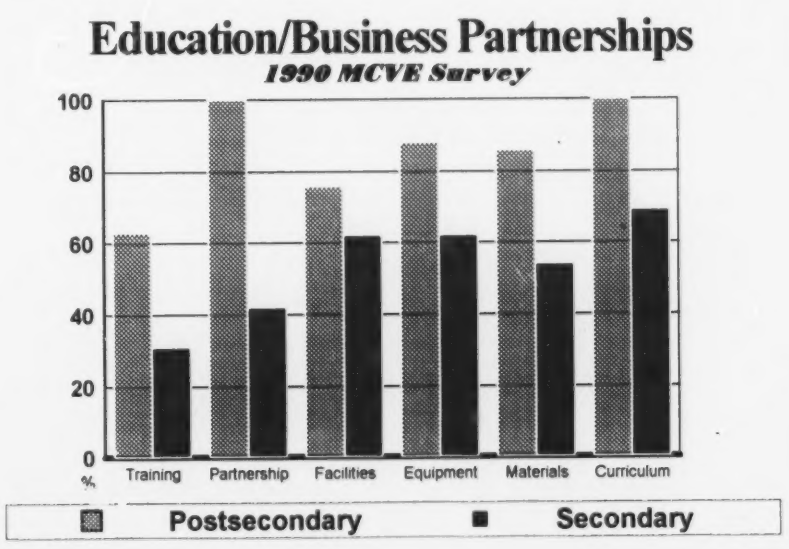
forces, participate in job shadowing, classroom presentations, informational interviews, share information on job seeking skills, application and resume' preparation and serve on local advisory councils. Both the Job Service and Chamber of Commerce respondents expressed their willingness to assist vocational educators whenever possible.

- Other responses included: providing on-the-job training; talking with students on the changing medical and business environment; talking with students on how to make contacts in getting a job; providing job site inspections; and informal discussion with business/industry and labor based on industry needs.

"We would do what we could to help employers better meet their needs." **Missoula Area Chamber of Commerce**

"Any real change will require that individuals like myself throughout the entire education and job training community quit worrying about protecting our turf and start focusing on our common goals. Vocational educators should lead by example: risk making some major changes; build networks of collaboration inside and outside the vocational education system; provide unquestionable quality and integrity in everything we do and realize that the role of change agent and leader is sometimes painful."(4)

The following graph represents secondary and postsecondary linkages between business/industry/labor & education in Montana.(3);

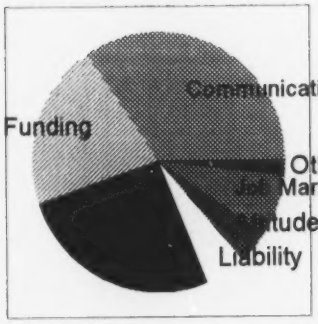


"We can encourage our members to look toward the students for trained workforce." **Chamber of Commerce**

In the 1993 MCVE Survey, the private sector indicated their willingness to become involved with vocational-technical education. They would like to become involved in the following (in rank order):

Assist in evaluation of instructional material	72%
Recommend, loan, or donate equipment.	65%
Provide guest speaker(s) to the classroom	65%
Assist educators in developing curriculum	63%
Participate in a mentoring program	54%
Field trips, demonstrations and hands-on experiences	50%
Provide updating for teachers	41%
Provide classroom instruction	38%

BARRIERS TO INVOLVEMENT



Cited by Vocational Educators-1993

	#	%
Lack of Communication	23	33
Lack of Time	17	25
Lack of Funds	14	20
Lack of Job Market	5	7
Liability & Supervision	4	5
Attitudes toward VoEd	3	4
Other Barriers	2	2

(Multiple responses were tallied)

Barriers to Involvement

The fact that there is a very limited industrial base and sparse population in many parts of Montana creates difficulties in preparing vocational-technical students and also limits the exposure of Montana's vocational teachers to potential employers of their students.

The graph on the left shows the most common barriers to involvement between the private sector and education according to Montana's vocational educators. Teachers and administrators in vocational programs and those in the private sector feel that these barriers adversely affect greater coordination and cooperation between business/industry/labor and vocational-technical programs.

LACK OF COMMUNICATION is a substantial barrier to coordination between the private sector and vocational education in Montana. The private sector needs more information on courses and programs - educators need to reach out to businesses and ask for involvement. These were the most frequent opinions on the 1993 MCVE Survey.

One business respondent commented: "My experience has shown that to a limited extent industry will reach out to vocational education. To be more effective, vocational programs must also reach out in an effort to inform industry as to what benefits can be offered." However, the majority of the responses indicated that education is expected to take the lead in communicating their needs to the private sector.

Political support of vocational-technical education by business/industry/labor is vital to the strength of the programs. State and federal funding are essential to existing programs and help fund new program development. Further, there must be continual effort by vocational educators to communicate the relevance and importance of vocational-technical training programs at the secondary and postsecondary levels to the private sector.

An anonymous response from Montana's business community to the 1993 MCVE survey illustrates the need for incentives in gaining this support: "Business and industry need a REASON to want to be involved such as wage support for vo-tech students going into industry for the first six months; tax incentives for industry to provide training for teachers; direct tax deductions for donations to vocational schools."

LACK OF FUNDING for equipment, facilities and training aids was a barrier cited by 21% of the educators responding.

LACK OF TIME to coordinate activities - coursework, work experience, new program development and meeting with the private sector is a definite barrier. Longer class periods are desirable for teaching in vocational-technical skill areas and for on-site projects.

LIABILITY and responsibility for students using donated equipment, visiting a business/industry facility or participating in on-the-job training is a deterrent for private sector involvement.

STEREOTYPING of vocational programs by the public as being less valuable than "college preparatory" coursework is perceived by

FROM EDUCATION:

"Perhaps the greatest barrier is time, both for those in the private sector and those in vocational education." (1993 MCVE Survey Response)

FROM BUSINESS:

"I would love to have the time to work on such a program because it is very much needed for our future but my time is eaten up with keeping current with government regulation and record keeping." (1993 MCVE Survey Response)

"Responsive to the changing technology and demands of the workplace, Tech Prep responds to what employers say they desire in terms of worker skills and preparedness." from 'TECH PREP NEWS & VIEWS', the Newsletter of the Central Montana Tech Prep Consortium - Fall, 1992.

vocational educators to be a problem in getting private sector involvement. As Chairman William Brock (SCANS) states " .... as a people and especially as educators, we must quit demeaning the non-college career path. Our front-line workers are our most crucial competition asset."

LIMITED JOB MARKET, geographic distance and isolation are barriers to involvement of many vocational programs with the private sector. On-the-job training opportunities are limited for students in small communities. Training for jobs that are not available locally requires simulated training in the classroom. Teachers also cited their need for specialized training in some emerging occupations and new technologies. Both the private sector and teachers expressed their willingness to participate in on-site teacher training during the summer months.

Tech Prep

The importance of encouraging the enhancement of the Tech Prep concept was mentioned repeatedly in the 1993 MCVE Survey. The importance of establishing and adhering to competency levels derived through input from employer committees or advisory councils was stressed.

Tech Prep is a four-year vocational-technical initiative combining the last two years of high school with two years of postsecondary education leading to an Associate of Applied Science (AAS) degree, a two-year certificate, or an apprenticeship.

The Tech Prep initiative requires the development of related academic skills right along with the technical, job specific training. These related skills in mathematics, communication, science, and technology equip students with the background to more effectively use their technical training in tomorrow's workplace.

The Tech Prep initiative is characterized by:

- strong career guidance, beginning at the middle/junior high school level;
- planned secondary/postsecondary collaboration;
- an executive committee and operational committee drawn from secondary and postsecondary officials;
- academics taught in an applied setting;
- technical specialization that gradually becomes more focused, particularly at the postsecondary level;
- **strong business involvement with representatives from local firms serving on Tech Prep committees, helping to validate curriculum and encouraging student participation in the program.**(5)

Congressman William D. Ford, Chairman of the Committee on Education and Labor and sponsor of the Tech Prep Legislation states that: "Tech Prep can make sense out of high school for students who currently flounder around in general track programs without goals. Vocational education in the Tech Prep format will help our country regain its competitive edge."

RECOMMENDATIONS for BUILDING STRONG BUSINESS-EDUCATION LINKS

COMMUNICATION

RECOMMENDATION #1: The Montana Council on Vocational Education (MCVE) recommends that Montana Business/Industry and Labor intensify their effort to communicate and interact in the design, planning and implementation of vocational-technical education programs.

The importance of interaction between business/industry/labor and education cannot be overstated. The need for closer working relationships and meaningful interaction between employers and educators was stated repeatedly in the 1993 Survey.

"In a larger community, like Great Falls, it is a matter of educators mixing with business leaders in the Chamber of Commerce and other business forums so that partnerships are formed naturally." (1993 MCVE Survey Response)

Suggested Action for Business/Industry/Labor:
One out of every six responses from the private sector contained the suggestion that teachers become involved in groups like the Small Business Development Councils, Chambers of Commerce, Trade and Business Associations and other groups where they can meet and communicate with employers personally. MCVE recommends that business/industry and labor representatives invite local vocational teachers and administrators to attend meetings of the organizations and trade associations with which they are involved and encourage active involvement.

Many secondary schools and postsecondary institutions currently offer services to business such as customized training, providing the location and environment for business meetings and bringing in experts from other localities to provide new information and technology for the private sector. MCVE encourages the private sector to take advantage of these services and make an effort to meet faculty and administrators of the facility and encourage their participation when possible.

REAL WORLD WORK EXPERIENCE

RECOMMENDATION #2: Establish opportunities within the workplace which provide structured work-based learning experiences for vocational students at the secondary and postsecondary levels.

"Employers need to know its OK to come to school." (1993 MCVE Survey Response)

Getting real-world work experience was stressed in the 1993 Survey. Terms like job-shadowing, on-the-job experience, cooperative education, internships, co-training, apprenticeships, trainee programs, and mentoring were common among the responses from vocational-education professionals, students and the private sector.

"Faster transitions in curriculum are needed to meet rapidly changing workplace needs." (1993 MCVE Survey Response)

Albert Shanker, President of the American Federation of Teachers, was quoted in the October 1992 issue of the American Vocational Association Education Journal: "Reward kids who do well in high school with better jobs and better pay, and kids will soon get more serious about high school. **The answer is to reconnect school with work.** The best kind of school-business partnerships make creative and respectful use of the resources and expertise of both partners. And they offer both partners something of value. For students, especially, the experience of seeing the connection between education and work could make the difference between being turned off or on to school and future possibilities."

Suggested Action for Business/Industry and Labor:
Hands-on experience and on-the-job training in combination with classroom training is seen as a necessary part of vocational technical education by the private sector. Sixty percent of the survey respondents have participated in cooperative education programs and many more expressed interest in participating. MCVE encourages teachers to have students make contacts with business while they are in school. When possible, assist them in gaining the work experience they need and give them guidance in the skills they will need to acquire and keep a job. Both educators and representatives from the private sector stressed the importance of students making contacts with business.

Asked whether they currently serve or would be interested in serving on an advisory council for vocational-technical education programs, **73% of the private sector surveyed either said 'yes' or asked for further information.** (1993 MCVE Survey)

CURRICULUM TO MEET THE NEEDS OF A CHANGING WORKFORCE

RECOMMENDATION #3: Communicate with vocational educators to ensure that industry-based performance standards and competencies are a vital part of the vocational-technical program.

Results of the 1993 MCVE Survey indicated a need to improve course content to meet the needs of the workplace. Responses included: "Give students a broad, practical education in skills they will need for the jobs that are available"; "Provide them with more hands-on training to prepare them for situations which will arise in business"; "Put emphasis on job search, job retention, motivation, interpersonal skills and customer service."

Suggested Action for Business/Industry and Labor:
Responses to the survey included excellent suggestions from three groups that were contacted: Job Service, educators and business/labor/industry.

From the Job Service came suggestions to place more emphasis on job seeking skills, encouraging employer presentations in classrooms and using employer committees in establishing competency levels.

The private sector emphasized the need for hands-on training and the importance of constant communication between schools and business to ensure that vocational education meets rapidly changing workplace needs.

Participation on advisory councils and employer willingness to provide opportunities for students to gain work experience were priorities with educators.

"Continue to explore and provide high school and college age students with career choices other than those needing a college degree." (1993 MCVE Survey Response)

"Present vocational-technical education as a viable option to high school students rather than as an alternative." (1993 MCVE Survey Response)

MARKET VOCATIONAL-TECHNICAL EDUCATION

RECOMMENDATION #4: **The council recommends that business/industry and labor promote marketing efforts designed to support, reinforce, coordinate, and expand vocational-technical education.**

The effectiveness of vocational-technical education is applauded by those who are familiar with the program and the quality of the employees it produces. However, there are many in education and in the private sector who are unaware of the value of vocational-technical education.

In the 1993 survey, the private sector repeatedly stated that a four-year college education is not needed for all careers with their companies. Institutionalizing a K-12 career guidance program and emphasizing academic fundamentals in the vocational classroom were seen as important in marketing vocational education.

Suggested Action for Business/Industry and Labor:
Whenever possible, communicate employment needs to the local school system. Again, offer to participate in mentoring or on-the-job training with students. Offer to share knowledge in the classroom.

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